U.S. Department of Energy
Office of River Protection
P.O. Box 450
Richland, Washington 99352

02-OSR-0392

Mr. R. F. Naventi, Project Manager
Bechtel National, Inc.
3000 George Washington Way
Richland, Washington 99352

Dear Mr. Naventi:

CONTRACT NO. DE-AC27-01RV14136 - NOTICE TO PROCEED WITH CONSTRUCTION OF LOW ACTIVITY WASTE (LAW) AND HIGH LEVEL WASTE (HLW) WALLS TO GRADE

References:

1. BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Request for Review and Approval of the Construction Authorization Request for the Hanford Tank Waste Treatment and Immobilization Plant," CCN-027627, dated January 31, 2002.

2. BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Request for Review and Approval of the Construction Authorization Request for the Hanford Tank Waste Treatment and Immobilization Plant," CCN-027638, dated February 19, 2002.

3. ORP letter from R. J. Schepens to R. F. Naventi, BNI, "U.S. Department of Energy (DOE) Notice to Proceed with Partial Construction Activities," 02-OSR-0289, dated July 9, 2002.

4. ORP letter from R. J. Schepens to R. F. Naventi, BNI, "Bechtel National, Inc.'s (BNI) Request for Authorization to Commence Construction Activities for the Hanford Tank Waste Treatment and Immobilization Plant (WTP) Prior to Preliminary Safety Analysis Report (PSAR) Approval Per 10 Code of Federal Regulations (CFR) 830.206 (Forms, Rebar, and Embedments for High Level and Low Level Facility Walls to Grade)," 02-AMPD-0106, dated August 7, 2002.

Bechtel National, Inc. (BNI) is authorized to proceed with early construction of the walls to grade for the LAW and HLW facilities of the River Protection Project Waste Treatment Plant (RPP-WTP). The U.S. Department of Energy, Office of River Protection (ORP) has determined that BNI has the programs and processes in place for successful project execution of this activity. However, this authorization is conditional on completion of two new conditions of acceptance as described in the enclosed Construction Authorization Agreement:

- Provide demonstration to ORP of structural design adequacy of the HLW facility walls to grade, as described in Section 4.2.1.2, Item 3(b) of the Safety Evaluation Report, before the construction of HLW walls to grade can commence.

- Complete hazard and accident analysis of internal flooding, including identification of control strategies required to protect the safety functions of the facility structure, assuming PCAR and PSAR reference structural design, before the start of full LAW and HLW facility construction.

The Construction Authorization Agreement has been signed by both ORP and BNI and describes the specific terms and conditions associated with ensuring the achievement of adequate safety. The specific scope of work associated with this construction has been agreed to by BNI and ORP as described in the BNI request for early authorization for construction of the walls to grade as described in the respective Construction Authorization Requests (References 1 and 2):

- Installation of external and internal structural concrete walls forms, rebar, and embedments (FRE) and placement of concrete from the – 21 foot elevation up to nominal grade elevation (+ 3 foot maximum) for the LAW facility, and associated backfill.

- Installation of external and internal structural concrete walls FRE and placement of concrete from the – 21 and – 31 foot elevations up to nominal grade elevation (+ 3 foot maximum) for the HLW facility, and associated backfill.

The following activities previously authorized by the Partial Construction Authorization Agreement (Reference 3), dated July 9, 2002, continue to be authorized:

- Installation of FRE for the basemat of the LAW facility; installation of the ground grid connection to the basemat rebar of the LAW facility; placement of the LAW facility basemat concrete and associated backfill.

- Installation of FRE for the basemat of the HLW facility; installation of the ground grid connection to the basemat rebar of the HLW facility; placement of the HLW facility basemat concrete and associated backfill.

In addition, the following activities currently authorized by the Limited Construction Authorization Agreement (Revision 1, dated December 19, 2001) continue to be authorized:

- Construction activities detailed in the Limited Construction Authorization Request (LCAR) Table 1, "WTP Project Limited Construction Activities."

- The radiological surveys, potential radiological contamination control and site remediation activities, and the use of industrial radioactive sources as described in the LCAR, Section 4.0, "Radiological Safety."

Construction work shall be performed in accordance with the Contract DE-AC27-01RV14136. The RPP-WTP regulatory process for radiological, nuclear, and process safety requires that construction activity be authorized in the form of an authorization agreement.

If you have any questions, please contact me, or your staff may call Robert C. Barr, Office of Safety Regulation, (509) 376-7851.

Sincerely,

Roy J. Schepens
Manager

OSR:LFM

Enclosure

Enclosure
02-OSR-0392

Construction Authorization Agreement, Revision 1
between
The U.S. Department of Energy, Office of River Protection
and
Bechtel National, Inc.

Construction Authorization Agreement, Revision 1

between
The U.S. Department of Energy, Office of River Protection
and
Bechtel National, Inc.

1. Purpose

This Construction Authorization Agreement (hereafter referred to as the "Agreement") identifies the scope of construction work authorized by the U.S. Department of Energy (DOE), Office of River Protection (ORP) and the terms and conditions associated with ensuring the achievement of adequate nuclear, radiological, and process safety.

2. Scope of the Authorization Agreement

This Agreement applies to the performance of specified construction activities associated with the River Protection Project Waste Treatment Plant (RPP-WTP) performed by Bechtel National, Inc. (BNI) and its subcontractors. The RPP-WTP is a large radiochemical processing facility located in the 200 East Area of the Hanford Site that will treat and immobilize Hanford tank wastes. The specific construction activities authorized under this Agreement are:

- Installation of external and internal structural concrete walls forms, rebar, and embedments (FRE) and placement of concrete from the – 21 foot elevation up to nominal grade elevation (+ 3 foot maximum) for the Low Activity Waste (LAW) facility, and associated backfill.

- Installation of external and internal structural concrete walls FRE and placement of concrete from the – 21 and – 31 foot elevations up to nominal grade elevation (+ 3 foot maximum) for the High Level Waste (HLW) facility, and associated backfill.

In addition, the following activities currently authorized by the Partial Construction Authorization Agreement (Revision 0, dated July 9, 2002) continue to be authorized:

- Installation of FRE for the basemat of the LAW facility; installation of the ground grid connection to the basemat rebar of the LAW facility; placement of the LAW facility basemat concrete and associated backfill.

- Installation of FRE for the basemat of the HLW facility; installation of the ground grid connection to the basemat rebar of the HLW facility; placement of the HLW facility basemat concrete and associated backfill.

The following activities currently authorized by the Limited Construction Authorization Agreement (Revision 1, dated December 19, 2001) also continue to be authorized:

- Construction activities detailed in the Limited Construction Authorization Request (LCAR), Table 1, "WTP Project Limited Construction Activities."

- The radiological surveys, potential radiological contamination control and remediation activities, and the use of industrial radioactive sources as described in the LCAR, Section 4.0, "Radiological Safety."

3. DOE Basis for Approval

The ORP has performed safety reviews and conducted oversight of the RPP-WTP Contractor in the areas of radiological, nuclear, and process safety in accordance with the specific regulatory actions established in the RPP-WTP Contract. Based on these reviews and oversight activities, the ORP has concluded that construction activities, if properly performed, will achieve adequate safety. The following specific regulatory actions, safety reviews associated with amendments to these documents, and oversight activities have led to this conclusion:

a. The Standards Approval regulatory action, which included the following reviews and approvals:

   - Review and approval of the Safety Requirements Document (SRD) as documented in RL/REG-98-01, *DOE Regulatory Unit Evaluation Report of BNFL Inc. Safety Requirements Document*, and RL/REG-98-20, *DOE Regulatory Unit Evaluation of BNFL Inc. Safety Requirements Document*, *Rev. 1A*.

   - Review and approval of the Integrated Safety Management Plan (ISMP) as documented in RL/REG-98-19, *DOE Regulatory Unit Evaluation of BNFL Inc. Integrated Safety Management Plan, Revision 3A*.

b. The Limited Construction regulatory action, which included the following reviews and approvals:

   - Review and approval of the LCAR[1] as documented in ORP/OSR-2001-11, *Safety Evaluation Report of Contractor's Limited Construction Authorization Request (LCAR),* Rev. 0.

   - Review and approval of the Radiation Protection Program for Design and Construction (RPP) as documented in ORP/OSR-2001-05, *Evaluation of the BNI Radiation Protection Plan for Design and Construction,* Rev. 5A.

   - Review and approval of the Quality Assurance Manual (QAM) as documented in ORP/OSR-2001-10, *Office of Safety Regulation Evaluation of the River Protection Project Waste Treatment Plant Contractor's Quality Assurance Manual,* Rev. 0.

[1] BNI letter from A.R. Veirup to M.K. Barrett, ORP, "Request for Review and Approval of the Limited Construction Authorization Request for the River Protection Project," CCN 020503, dated June 5, 2001.

c. That portion of the Construction Authorization regulatory actions related to the activities described in Item 2 above, which included the following reviews and approvals:

- Review and approval of the Partial Construction Authorization Requests (PCAR)[2] as documented in ORP/OSR-2002-18, *Safety Evaluation Report for Waste Treatment Plant (WTP) Partial Construction Authorization*, Rev. 0. The PCAR covered construction of the HLW and LAW facility basemats, and approval for construction was subject to certain conditions, as described in detail in the attachment to this document.

- Review and approval of the Construction Authorization Request for the LAW facility[3] and HLW facility[4] walls to grade as documented in Revision 1 of ORP/OSR-2002-18, *Safety Evaluation Report for Waste Treatment Plant (WTP) Construction Authorization*. Approval of construction of walls to grade was also subject to certain conditions, as described in detail in the attachment to this report. Two new conditions of acceptance were added for construction of walls to grade.

- Based on the safety reviews and oversight activities described in this section, the ORP has determined that the authorized construction activities are not detrimental to public health and safety.

- As described in Revision 1 of the SER, ORP has determined that early construction of the LAW and HLW facility basemats and walls to grade will increase the probability of initiating WTP hot commissioning within DOE WTP schedule commitments. In addition, the ORP Office of Assistant Manager for Project Delivery has determined that there were potential cost benefits associated with commencing early construction activities. On this basis, the ORP concluded that authorizing early construction activities is in the best interests of DOE.

d. The Oversight Process regulatory action, which included the following oversight activities:

- OSR inspections of WTP contractor activities during the WTP design phase. These inspection activities are established in RL/REG-98-05, *Inspection Program Description for the Regulatory Oversight of the RPP-WTP Contractor*. Safety issues raised in these inspections are resolved in accordance with the Corrective Action Program established in RL/REG-98-06, *Corrective Action Program Description*. The ORP has determined that there are no outstanding safety issues associated with the inspection program that would have an adverse safety impact on construction activities to be authorized.

---

[2] BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Request for Review and Approval of the Partial Construction Authorization Request for the Hanford Tank Waste Treatment and Immobilization Plant," CCN-024490, dated December 10, 2001.

[3] BNI letter, A.R. Veirup, BNI, to M.K. Barrett, ORP, "Contract No. DE-AC27-01RV14136 – Request for Review and Approval of the Construction Authorization Request for the Hanford Tank Waste Treatment and Immobilization Plant," CCN 027627, dated January 31, 2002.

[4] BNI letter, A.R. Veirup, BNI, to M.K. Barrett, ORP, "Contract No. DE-AC27-01RV14136 – Request for Review and Approval of the Construction Authorization Request for the Hanford Tank Waste Treatment and Immobilization Plant," CCN 027638, dated February 19, 2002.

- The OSR conducted a Partial Construction Authorization Readiness Inspection in accordance with RL/REG-98-05. The OSR determined that necessary BNI programs and procedures were in place, and that BNI was ready to commence partial construction activities. The inspection will be documented in OSR Inspection Report IR-02-008, *Partial Construction Authorization Readiness Inspection* (in preparation).

4. Authorization Basis

The RPP-WTP authorization basis is the composite of information provided by the RPP-WTP contractor in response to radiological, nuclear, and process safety requirements. The implementation of these requirements forms the basis upon which the DOE grants permission to perform regulated activities. The following specific documents (including material incorporated by reference) provided by BNI are the basis for DOE's decision to authorize the construction activities specifically described in Section 2, above:

a. SRD, Volume II, 24590-WTP-SRD-ESH-01-001-02, Rev. 1, dated June 6, 2002.

b. Integrated Safety Management Plan (ISMP), 24590-WTP-ISMP-ESH-01-001, Rev. 1a, dated June 6, 2002.

c. Portions of the Initial Safety Analysis Report (ISAR), BNFL-5193-ISAR-01, Revision 2, as amended. As described in Section 3.3.1.3 of the ISMP, those portions of the ISAR, which are not described in the PCAR but are related to fundamental aspects of design, are part of the authorization basis until subsequent supersession by the approval of the HLW and LAW portion of the entire PSAR (not including the Analytical Laboratory). Also, those portions of the ISAR that are incorporated by reference in the SRD and ISMP are part of the authorization basis.

d. LCAR, which consists of the following BNI submittal: Limited Construction Authorization Request (24590-WTP-LCAR-ESH-01-001, Rev. 1, dated September 24, 2001).

e. Preliminary Safety Analysis Report (PSAR), which consists of the following BNI submittals: (1) PSAR to Support Construction Authorization: General Information (24590-WTP-PSAR-ESH-01-002-01, Rev. E, dated February 1, 2002); (2) PSAR to Support Construction Authorization: LAW Facility Specific Information (24590-WTP-PSAR-ESH-01-002-03, Rev. F, dated February 1, 2002); (3) PSAR to Support Construction Authorization: HLW Facility Specific Information (24590-WTP-PSAR-ESH-01-002-04, Rev. H, dated February 14, 2002).

f. Quality Assurance Manual (QAM), 24590-WTP-QAM-QA-01-001, Rev. 0, dated August 31, 2001.

g. Radiation Protection Program for Design and Construction (RPP), 24590-WTP-RPP-ESH-01-001, Rev. 0, dated December 11, 2001.

5. Terms and Conditions

a. Construction activities shall be performed in accordance with the RPP-WTP authorization basis.

b. BNI shall maintain the authorization basis current with respect to changes made to the facility design and administrative controls, and in light of significant new safety information.

- BNI-initiated changes to the authorization basis shall be performed in accordance with RL/REG-97-13, *Office of Safety Regulation Position on Contractor-Initiated Changes to the Authorization Basis*, as amended.

c. BNI shall incorporate and implement new or revised radiological, nuclear, and process safety requirements as directed by the ORP in accordance with RL/REG-98-14, *Office of Safety Regulation Position on New Safety Information and Back-fits*.

d. BNI shall identify and correct conditions that do not conform to the RPP-WTP authorization basis in accordance with the ISMP, which describes the BNI's implementation of RL/REG-98-06, *Corrective Action Program Description*.

e. BNI shall report occurrences that involve nuclear, radiological, or process safety to the ORP in accordance with the Construction Occurrence Reporting Plan for Limited Construction (LCAR, Appendix B, Revision 0, as amended), which has been adopted by BNI for construction activities.

f. Prior to commencing the construction activities described in Section 2 above and not previously authorized, BNI shall inform ORP that it is ready to commence these construction activities.

g. The authorization agreement also is subject to completion of the conditions identified in Attachment A on the schedule therein.

6. Contractor Qualification

Construction activities will be performed under DOE Contract DE-AC27-01RV14136.[5] Evaluation of contractor qualifications was a key factor in the solicitation process associated with awarding the Contract. During the solicitation process, the DOE Source Evaluation Board determined that BNI was qualified to perform the work specified in the Contract. In addition, during the PCAR review described in Section 3.b above, the ORP reviewed information provided in the PCAR specifically related to BNI's qualifications to perform important-to-safety activities and determined that the information adequately demonstrated BNI's qualifications to safely perform the activities authorized in this Agreement. On this basis, the ORP has determined that BNI is qualified to perform important-to-safety RPP-WTP construction activities.

[5] Contract DE-AC27-01RV14136 between the U.S. Department of Energy and Bechtel National, Inc., dated December 11, 2000.

7. Agreement

This Agreement is subject to the conditions specified herein, and ORP and BNI agree to these conditions. This Agreement becomes effective upon the date of signature by both parties and shall expire upon termination of Contract DE-AC27-01RV14136, completion of authorized partial construction activities, or when this Agreement is superseded by a subsequent authorization agreement. This Agreement does not alter any terms or conditions specified in Contract DE-AC27-01RV14136. This agreement supersedes the Partial Construction Authorization Agreement (Rev. 0, dated July 9, 2002).

_____/_____	_____/_____
Signature Date	Signature Date
Roy J. Schepens, Manager Office of River Protection U.S. Department of Energy	R. F. Naventi Project Manager Bechtel National, Inc.

Attachment

Attachment

Conditions of Acceptance for Low Activity Waste and High Level Waste Construction Authorization Request

The following conditions of acceptance were identified by the Office of Safety Regulation in its review of the Construction Authorization Request. The conditions are listed in the following order of expected completion dates:

- Before construction of walls to grade
- Before authorization of facility construction (Low Activity Waste [LAW], High Level Waste [HLW], or full facility,[6] as applicable)
- With the first revision of the Preliminary Safety Analysis Report (PSAR) after authorization for construction
- Before start of pre-operational testing
- With the Final Safety Analysis Report.

A. Before Construction of Walls to Grade

1. Provide demonstration of structural design adequacy of HLW walls to grade as described in Section 4.2.1.2, Item 3(b) of this Safety Evaluation Report (SER) before the construction of walls to grade can commence. (SER, Section 4.2.1, "HLW Facility Description")

B. Before Authorization of Facility Construction (LAW, HLW, or Full Facility, as Indicated)

1. Revise design calculation report, 24590-LAW-DBC-S13T-00005, *Thermal Analysis for Basemat and Pour Cave Walls*, to incorporate the results of the computational fluid dynamics analysis of the pour cave. The analysis must confirm that the concrete temperatures of the LAW melter and pour caves could be maintained within design limits during the postulated loss of cooling accident scenario. All structural calculations affected by the computational fluid dynamics analysis must be revised, as appropriate. (SER, Section 4.1.2, "LAW Facility Hazard and Accident Analysis")

2. Perform transient computational fluid dynamics analysis of design basis event 2700 L HLW molten glass spill. (SER, Section 4.2.1, "HLW Facility Description")

[6] The term "full facility" refers to the LAW, HLW, and Pretreatment facilities, not including the Analytical Laboratory.

3. Submit an evaluation of the combined effects of seismically induced radiological releases from the Pretreatment, LAW, and HLW buildings on the workers, co-located workers, and the public through a seismic probabilistic risk analysis study before full facility construction (not including the Analytical Laboratory). (SER, Section 4.2.2, "HLW Facility Hazard and Accident Analysis")

4. Provide the Design Basis Event (DBE) analysis of the 2700 L HLW molten glass spill accident. (SER, Section 4.2.2, "HLW Facility Hazard and Accident Analysis")

5. Complete hazard and accident analysis of internal flooding, including identification of control strategies required to protect the safety functions of the facility structure, assuming Partial Construction Authorization Request (PCAR) and PSAR reference structural design, before the start of full LAW and HLW facility construction. (SER, Section 4.1.2, "LAW Facility Hazard and Accident Analysis," and Section 4.2.2, "HLW Facility Hazard and Accident Analysis")

C. With First Revision of the Full Facility PSAR After Authorization for Construction

1. Revise Section 12.3.1.1 to state: "The project readiness assessment process determines the procedure set required to support Construction activities. Procedures are developed and issued before the activity governed by the procedure takes place." In addition, provide a table in Section 12.3.1.1 to indicate which activities are addressed in management control procedures during design and construction, cold commissioning, and hot commissioning and operations. (SER, Section 3.12, "Procedures and Training")

2. Revise Section 12.3.1.1 as follows to clarify who can approve procedures: "The procedure process is governed by the project procedure on procedures. It requires that management associated with Environmental, Safety and Health (ES&H) and quality assurance (QA) review new procedures and concur that they are or are not within the authorization basis. ES&H and QA review changes to existing procedures if they affect the authorization basis or QA requirements. At a minimum, management associated with the relevant safety disciplines concurs with new procedures and changes to existing procedures that affect the authorization basis requirements." (SER, Section 3.12, "Procedures and Training")

3. Revise Section 12.3.2.2 to state: "The procedures covering the following topics are in place as needed for the construction phase of the project. Changes and additions to the procedure set will be identified before cold commissioning and scheduled for completion before the activity taking place: major management control systems, system and facility operations (including control of hazardous processes), major maintenance activities (including safe work practices), hazardous materials control activities, radiological control activities, and emergency response activities (including radiological and hazardous chemical release)." (SER, Section 3.12, "Procedures and Training")

4. Add the following to Section 12.3.1.1: "For construction activities, the basic work planning process is based on the concept that for standard construction tasks, step-by-step work instructions are not required. A combination of technical specifications, field procedures, and drawings are used to perform the work. Individuals involved in the work

are trained to the requirements of the work. The work is planned using a construction administrative procedure addressing construction work packages. When unique or complex tasks are performed, work planning is addressed in a construction administrative procedure addressing special instruction work packages. This procedure provides for using a work package with additional controls, including, where appropriate, step-by-step instructions." (SER, Section 3.12, "Procedures and Training")

5. Add the following to Sections 12.3.3.1 and 12.3.3.2.1: "The project procedure complies with the Waste Treatment Plant QA Manual and addresses permanent procedure revisions and expedited procedure changes." (SER, Section 3.12, "Procedures and Training")

6. In Section 12.4 of Volume I of the PSAR, define the periodic basis for comparing training materials with the list of tasks selected for training. (SER, Section 3.12, "Procedures and Training")

7. In Section 12.4 of Volume I of the PSAR, clearly state in the learning objectives the knowledge, skills, and abilities the trainee must demonstrate; that learning objectives are sequenced based on their relationship to one another; the conditions under which required actions will take place; and the standards of performance the trainee should achieve when completing the training. (SER, Section 3.12, "Procedures and Training")

8. In Section 12.4 of Volume I of the PSAR, define review and approval requirements for lesson plans, training guides, and other training materials before they are issued and used. (SER, Section 3.12, "Procedures and Training")

9. In Section 12.4 of Volume I of the PSAR, describe that when an actual task cannot be performed and is walked-through, the conditions of task performance, references, tools, and equipment reflect the actual task to the extent possible. (SER, Section 3.12, "Procedures and Training")

10. In Section 12.4 of Volume I of the PSAR, define the periodic basis for conducting training program evaluations. (SER, Section 3.12, "Procedures and Training")

11. In Chapter 16 of Volume I of the PSAR, or in the draft deactivation plan, clarify the commitment to reduce radiation exposure to workers and the public during and following deactivation and decommissioning. (SER, Section 3.16, "Deactivation and Decommissioning")

12. Add the following statement to Section 16.3.5 of Volume I of the PSAR: "While the proposed decommissioning method has not been specified, the facility is being designed to limit contamination, facilitate decontamination, and minimize the dose and generation of waste in the event reuse or demolition of the facility is the ultimate decommissioning method." (SER, Section 3.16, "Deactivation and Decommissioning")

13. Change the R1, R2, and R3 contamination classifications listed in Section 16.3.1 of Volume I of the PSAR consistent with current procedures; i.e., C1, C2, C3, and C5 classification. (SER, Section 3.16, "Deactivation and Decommissioning")

14. Describe organizational responsibilities and staffing interfaces for the configuration management program in Section 17.4.3 of Volume I of the PCAR. (SER, Section 3.17, "Management, Organization, and Institutional Safety Provisions")

15. Correct the discrepancies related to the control strategy development records identification system used in the Standards Identification Process Database and as referenced in the LAW PCAR and HLW PCAR texts and tables. (SER, Section 4.1.2, "LAW Facility Hazard and Accident Analysis")

16. Revise the PSAR to correct the omission of additional safety functions for the basemat based on the seismic DBE event being SL-2 for the facility and co-located worker, the misfeed event being SL-1 for the facility worker, and the liquid spill/overflow from the LAW concentrate receipt vessel being SL-2 for the facility worker. (SER, Section 4.1.2, "LAW Facility Hazard and Accident Analysis")

17. Revise the design drawings that were used to support the hazard and accident analysis of the embedded C5 ventilation ductwork to reflect the configuration used in the accident analysis. (SER, Section 4.2.1, "HLW Facility Description")

D. Before Start of Pre-Operational Testing

1. Specify the review and revision cycle of procedures and provide to DOE. (SER, Section 3.7, "Radiation Protection")

2. Revise procedure report, 24590-WTP-GPP-SIND-001-0, *Reporting Occurrences in Accordance with DOE Order 232.1A*, to address hazards and activities. (SER, Section 3.17, "Management, Organization, and Institutional Safety Provisions")

E. With the Final Safety Analysis Report

1. In the description of the Radiological Controls Program (RCP), provide a detailed organization chart that shows the radiation safety organization and its relationship to senior plant personnel and other line managers. Also, provide job descriptions defining specific authorities and responsibilities of radiation safety personnel. (SER, Section 3.7, "Radiation Protection")

2. Describe the mechanism for ensuring that radiation work permits are not used past their termination dates in the RCP. (SER, Section 3.7, "Radiation Protection")

3. In the RCP, describe the methods for analyzing airborne concentrations; methods for calibrating air sampling and counting equipment; actions levels and alarm setpoints; the basis used to determine action levels, investigation levels, and derived air concentrations and minimum detectable activities for the radionuclides; the frequency and methods for analyzing airborne concentrations; counting techniques; specific calculations and levels; action levels and investigation levels; locations of continuous air monitors, if used; and locations of annunciators and alarms. (SER, Section 3.7, "Radiation Protection")

4. Identify the types and quantities of contamination monitoring equipment and the methods and types of instruments used in the surveys in the RCP. (SER, Section 3.7, "Radiation Protection")

5. Identify the locations of the facility's respiratory equipment in the RCP. (SER, Section 3.7, "Radiation Protection")

6. In the RCP, describe the radiation measurement selection criteria for performing radiation and contamination surveys, sampling airborne radioactivity, monitoring area radiation, and performing radioactive analyses. List the types and quantities of instruments that are available, as well as their ranges, counting mode, sensitivity, alarm setpoints, and planned use. Describe the instrument storage, calibration, and maintenance facilities and laboratory facilities used for radiological analyses. (SER, Section 3.7, "Radiation Protection")